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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,956	01/22/2002	Anders Jonsson	240.301	8678

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EXAMINER

PIAZZA CORCORAN, GLADYS JOSEFINA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary

Application No.

10/031,956

Applicant(s)

JONSSON ET AL.

Examiner

Gladys J Piazza Corcoran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3, 6</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 6 is unclear by reciting "and including plastic material". It is unclear what includes plastic material or what this further adds to the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3-6, 8-10, 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Susuki et al. (US Patent No. 3,666,590).

Susuki discloses a method for the manufacture of corrugated material, at least one first plane sheet (s1) and one second sheet of plastic material arranged in wave shape (s) being brought together for adhesion to each other and the wave-shaped sheet running over core bars (31, 32, ...), where the core bars extend in the longitudinal direction of the wave-shaped sheet (column 3, lines 33-43), that a portion of at least one sheet is heated at abutment against the core bars (column 3, lines 43-68), that the first

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sheet is brought to abutment against the second sheet for welding the sheets together (column 3, lines 43-68) and energy is supplied locally to contact surfaces of abutting sheet portions (heat is supplied to the sheets for welding; column 3, lines 43-68).

As to claim 3, at least a portion of the at least one sheet is heated indirectly with heating members (heating means 6) arranged at a distance from the core bars. As to claim 4, the second sheet arranged in a wave sheet is corrugated before it reaches the core bars (column 2, lines 65-72). As to claim 5, the first sheet and the second sheet are pressed together against each other between a line of core bars (31, 32, ...) and at least one press roll (rollers 52).

As to claim 6, Susuki discloses a device with first members (rollers R3) for feeding a first plane sheet and a second sheet and running over core bars (31, 32, ...) and second members (rollers 52) arranged to bring together and adhering the sheets, where the core bars (31, 32, ...) extend in the longitudinal direction (column 3, lines 33-43), heating members (6) are arranged to transfer heat locally to contact surfaces of a portion of at least one sheet abutting against the core bars (31, 32, ...) and guide members (R3, 52, 5) arranged for bringing together the first and second sheet in abutment portion and for welding together in the portion heated by the heating members.

As to claims 8 and 9, the heating members (6) are arranged at a distance from the core bars (31, 32, ...) and transfer energy to the abutment area and heat the core bars. As to claim 10, corrugation members (21, 22) are arranged to corrugate the second sheet before reaching the core bars (31, 32, ...). As to claim 14, the core bars

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(31, 32, ...) are arranged in an upper line (even numbers) and a lower line (odd numbers) (see figures).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Susuki et al. (US Patent No. 3,666,590) as applied to claims 1 and 6 above, and further in view of Casella (US Patent No. 5,399,221) and /or Fell (US Patent No. 5,252,163).

It is well known in the art to provide heating members within core bars when laminating layers together in order to provide additional heat at the point of contact between the layers. For example, Casella discloses providing heated forming bars in order to provide heat to the contact surfaces directly (column 6, lines 30-60). Fell

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discloses another example of providing the forming bars with heating members in order to heat the contact surfaces directly (column 18, lines 11-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method and apparatus as shown in Susuki with heating members in the core bars in order to directly heat the contact surfaces as is well known in the art and exemplified by Casella and/or Fell.

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Susuki et al. (US Patent No. 3,666,590) as applied to claim 10 above, and further in view of Chapman Jr. (US Patent No. 5,508,083).

It is well known in the art to corrugate layers by using upper and lower plates with alternating ridges in order to properly form the corrugation in the layer. Chapman discloses one example of upper and lower plates with alternating ridges in order to form the corrugations in the layer of web material (column 6, lines 40-63). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the apparatus in Susuki with upper and lower plates for the corrugating members as is a well known equivalent alternative in the art for forming corrugation in a layer of material and further exemplified by Chapman.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Susuki et al. (US Patent No. 3,666,590) as applied to claim 6 above, and further in view of Meyer et al. (US Patent No. 2,547,880) and/or Chapman Jr. (US Patent No. 5,508,083).

It is known in the art to provide formers for forming longitudinal waves in a web first and the center and then outwards to the sides with the formers in a V shape in

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order to prevent the web from tearing. For example, Meyer discloses forming longitudinal waves from the center first and then out to the edges (forming a V shape) in order to properly form the waves without damaging the web (column 6, lines 19-54). Chapman also discloses another example where the formers contact the web in the center first and then out to the edges (forming a V shape) in order to form the waves without damaging the web (column 9, lines 17-40). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the apparatus as shown in Susuki with the core bars longer in the center and shorter in the sides (thus forming a V-shape) in order to pass the web through the bars without damaging the web since it is well known in the art to provide formers in the shape of a V to form the web from the center out in order to prevent damage to the web as exemplified by Meyer and/or Chapman, only the expected results would be attained.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Susuki et al. (US Patent No. 3,666,590) in view of Casella (US Patent No. 5,399,221) and /or Fell (US Patent No. 5,252,163) as applied to claim 6 above, and further in view of Bequet et al. (US Patent No. 3,744,952).

As discussed above, Casella and Fell both disclose it is known to provide heating members within the core bars in order to provide direct heating to the contact surfaces of the webs to be laminated. Casella and Fell also disclose providing electrical current to the bars to provide heating. It is further known in the art to provide electrical resistance wires to bars for forming webs in order to provide heating to the particular area of the web. For example, Bequet discloses providing electrical wires on formers in

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order to heat the particular areas of the web. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the apparatus as shown in Susuki, Casella and/or Fell with electrical resistance wires in the core bars in order to provide heat to the contact surfaces of the webs as is known in the art and exemplified by Bequet, only the expected results would be attained.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Susuki et al. (US Patent No. 3,666,590) as applied to claim 14 above, and further in view of Scogland (US Patent No. 2,454,719).

Scogland shows it is known in the art to form laminated plastic sheet board of multiple layers by providing three rows of core bars in order to form the waves between the layers. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the apparatus in Susuki with a third row of core bars in order to form a plastic board with multiple layers as shown by Scogland, only the expected results would be attained.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gladys J Piazza Corcoran whose telephone number is (571) 272-1214. The examiner can normally be reached on M-F 8am-5:30pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gladys JP Corcoran
Examiner
Art Unit 1733

GJPC